

EPO-BERLIN

01-04- 2004

New claims

1. A process for the selective removal of sulphur compounds from synthesis gas containing at least 5% carbon monoxide, at least 5% hydrogen and at least 0.5% carbon dioxide and containing water in a concentration up to saturation at a pressure of at least 15 bar comprising contacting the synthesis gas at a maximum contact temperature of 100°C with an absorbent comprising Cu/ZnO compounds and activated with a reducing gas.
2. Process of claim 1, wherein the sulphur compounds comprise H₂S and COS.
3. Process according to any one of the preceding claims, wherein the synthesis gas contains H₂S in an amount effective for suppression of metal dusting of metals in contact with the synthesis gas within a temperature range between 300°C to Boudouard temperature of the synthesis gas.